REMARKS/ARGUMENTS

The Applicants thank the Examiner for the thorough consideration given the present application. Claims 19-30 are pending in the present application; claims 1-18 have been previously cancelled; and claims 19 and 25 have previously been amended. The Examiner is respectfully requested to reconsider the rejections of claims 19-30 in view of the Remarks set forth below.

Acknowledgment of Information Disclosure Statements

The Examiner has not acknowledged the Information Disclosure Statement filed on March 4, 2002. After checking the PAIR system, it appears that the Information Disclosure Statement of March 4, 2002 was not placed in the File History. The transmittal letter indicates that the Information Disclosure Statement was submitted with the application as filed, and a copy of the Information Disclosure Statement and the references are in Applicants' attorneys' files. Accordingly, a duplicate copy of the Information Disclosure Statement and references are being filed concurrently with this Reply. The Examiner is respectfully requested to consider the references and to provide an initialed copy of the duplicate Information Disclosure Statement with the next issued Office Action.
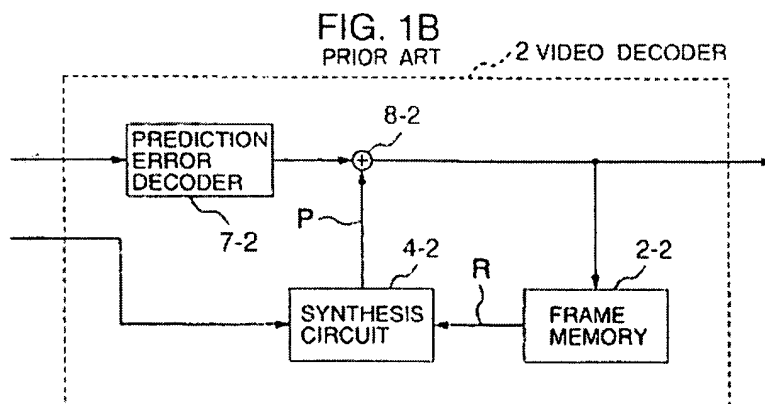
The Rejection of Claims 19-21, 23-26 and 28-30 under 35 U.S.C. § 102(e)

The Examiner has rejected claims 19-21, 23-26 and 28-30 under the provisions of 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 5,963,259 (Nakaya et al.,

hereinafter "Nakaya"). The Office Action states on page 3 that the Nakaya et al. patent discloses the Applicants' claimed rounding information which indicates the accuracy for rounding and which is decoded from the bitstream. The Applicants respectfully disagree that Nakaya discloses the claimed rounding information or that the rounding information is decoded or extracted from the encoded bitstream.

The Nakaya et al. Patent

The Nakaya et al. patent discloses a video coding/decoding system for a high-resolution reference image. The Applicants' respectfully disagree with the Examiner regarding whether there is a detailed illustration and description of the video decoder of Nakaya and an encoded bitstream. In Fig. 1B of Nakaya, there is an illustration of a PRIOR ART video decoder. For the convenience of the Examiner, Fig. 1B is reproduced below:

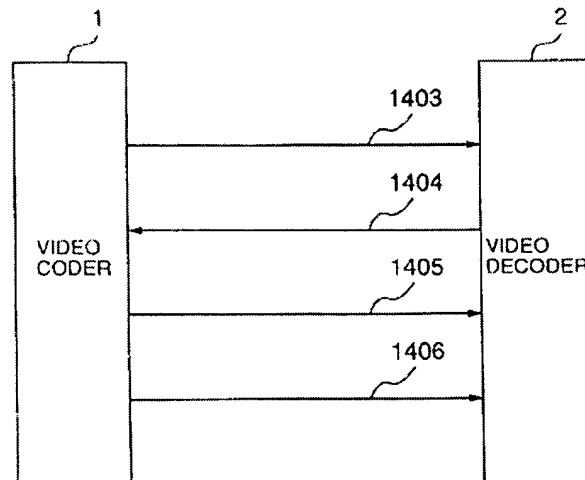
FIG. 1B
PRIOR ART   2 VIDEO DECODER

It is respectfully submitted that Nakaya does not disclose the functional details of the video decoder 2 or the details of the encoded bitstream that is input to the PRIOR ART video decoder 2 of Fig. 1B. (On page 3, the Office Action relies upon Fig. 1B as providing the detailed illustration of the decoder.) The PRIOR ART video decoder 2 appears to receive its input from the output of a video encoder 1 and motion vector calculation circuit 908 of Fig. 10.

Nakaya states that, "Upon completion of the entire refinement process, the information stored in the grid point coordinate memory 904 is converted into a motion vector for each grid point at a vector computation circuit 908 and output as *motion information 415.*" [emphasis added]. (Col. 12, lines 60-64). It is respectfully submitted that Nakaya does not disclose that the *motion information 415* includes <u>a motion vector and rounding information in the bitstream, and rounding the calculated position with the rounding information, the rounding information indicating accuracy for rounding and being decoded from the bitstream (claim 19)</u> or a <u>motion vector being comprised in the bitstream and rounding information, the rounding information being extracted from the bitstream</u> (claim 25), as claimed by the Applicants.

In fact, the Nakaya patent appears to teach away from the claimed invention with the diagram of Fig. 14 which shows an example scheme for determining the value of 1/d using *communication between the sending (encoder) and receiving (decoder) ends before transmission of video data.* For the convenience of the Examiner, Fig. 14 of Nakaya is reproduced below:

FIG. 14

Nakaya describes the communication between the video encoder 1 and the PRIOR

ART video decoder 2 as follows:

> The value d can be either defined as a fixed parameter for the coding/decoding
> system, or can be determined as a variable by arrangement between the sending
> and the receiving ends before transmitting the video data. An example procedure
> for determining the value d by communication between the video coder 1 at the
> sending end and the video decoder 2 at the receiving end is shown in FIG. 14.
> First, step 1403 causes the sending end to notify the receiving end by
> communication that the allowable upper limit of d is 4 due to the hardware
> restriction of the video coder 1. Then, the receiving end at step 1404 notifies the
> sending end by communication that the upper limit of d is 2 due to the restriction
> of the video coder 2. As a result, the sending end decides that the optimum value
> of d is 2 and gives advice at step 1405 that the video data subsequently
> transmitted is coded with d as 2. Immediately after this advice, the sending end
> transmits video data at step 1406. [emphasis added]. (Col. 15, lines 34-50).

The Applicants claimed invention does not rely upon some fixed value or

communication between the encoder and decoder before transmission of video data.

The Applicants' claimed invention specifically claims rounding information which is

decoded from the encoded bitstream (claim 19) or rounding information which is extracted from the encoded bitstream (claim 25).

In Applicants' Figure 35, there is a clear illustration of the encoded bitstream 19 and the output of the entropy decoder 51 which includes both a motion vector 25b and interpolation precision indicating data 60 which is either decoded or extracted from the encoded bitstream. The claimed rounding information is not transmitted before the transmission of video data as disclosed in Nakaya. The encoded bitstream of the claimed invention provides the entropy decoder 51 with both the claimed motion vector and rounding information. When the claimed rounding information is decoded or extracted from the bitstream, the rounding information is used to indicate accuracy.

Applicants also believe that Fig. 14 of Nakaya only shows that a variable is received before transmitting the video data. Accordingly Nakaya needs the same period before every transmission, which is clearly different from the Applicant's claimed invention.

For all of the reasons described above, Applicants respectfully submit that Nakaya does not anticipate claims 19-21, 23-26 and 28-30, and the Examiner is respectfully requested to withdraw the rejection.

The Office Action Does Not Adequately Support A Finding Of Inherency

On the last two lines of page 4 of the Office Action, it is clear that the rejection under 35 U.S.C. § 102(e) is based upon inherency and that the Examiner cannot show that the rounding information of Nakaya is actually decoded or extracted from the

bitstream as required by the claims. The Office Action states, "Hence, rounding information as represented by Fi(x,y) and Gi(x,y) are communicated via bitstream *(inherent)* to and from the encoder and decoder." [emphasis added]. It is respectfully submitted that the Examiner has failed to show that Nakaya's rounding information is actually "decoded" or "extracted" from the bitstream.

The law regarding a rejection based upon inherency is clear. The fact that a certain result or characteristic <u>may</u> occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. *In re Rijckaert*, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993) (reversed rejection because inherency was based on what would result due to optimization of conditions, not what was necessarily present in the prior art); *In re Oelrich*, 666 F.2d 578, 581-82, 212 USPQ 323, 326 (CCPA 1981). "To establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.' " *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999).

It is respectfully submitted that the Office Action has not shown that the missing descriptive matter, relating to the claimed rounding information being <u>decoded</u> or <u>extracted</u> from the bitstream, is necessarily present in Nakaya reference. Accordingly, Applicants believe that the rejection under 35 U.S.C. § 102(e) must be withdrawn, because the Examiner's position regarding inherency is unsupported and actually

appears to be contradicted by the teachings of Nakaya which teach away from the claimed invention.

Claims 22 and 27

The Office Action has also rejected claims 22 and 27 as being unpatentable over the Nakaya et al. patent in view of the U.S. Patent 6,236,682 (Ota et al.). It is respectfully submitted that claims 22 and 27 are patentable over the cited prior art for at least the same reasons as the independent claims from which they respectively depend.

Conclusion

In view of the above remarks, it is believed that the claims clearly distinguish over the patents relied on by the Examiner, either alone or in combination.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Richard J. McGrath (Reg. No. 29,195) at the telephone number of (703) 205-8000, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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